REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-11 are presently active in this case.

The outstanding Office Action rejects Claims 1-9 and 11 under 35 U.S.C. § 103(a) as unpatentable over Boyd et al. (U.S. Patent No. 6,271,094 B1, herein "Boyd") in view of Misra et al. (U.S. Patent No. 5,960,270, herein "Misra") and Ismail et al. (U.S. Patent No. 5,955,759, herein "Ismail"); and rejects Claim 10 under 35 U.S.C. § 103(a) as unpatentable over Boyd in view of Misra and Ismail, and further in view of Gardner et al. (U.S. Patent No. 6,200,865, herein "Gardner").

Applicant and Applicant's representatives wish to thank Examiner Peralta for the interview granted on August 12, 2004. During that interview, Claim 1 was discussed and compared with the asserted prior art. During the interview, the Examiner noted that the Ismael reference does not seem to disclose the transformation of a silicide layer into an insulation layer as recited in Claim 1, and indicated that the Examiner's search would be updated when the remarks provided during the interview are formally presented in a filed response. The remarks provided herewith are consistent with the remarks provided during the interview.

In regard to the rejection of Claims 1-9 and 11 under 35 U.S.C. § 103(a) as unpatentable over Boyd in view of Misra and Ismail, Applicant respectfully traverses the rejection for the following reasons.

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), each of three requirements must be demonstrated. First, Boyd in view of Misra and Ismail, when combined, must teach or suggest each and every element recited in the claims.[1] Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge

[1] See MPEP § 2143.

generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention.[2] Third, a reasonable probability of success must exist with respect to the proposed combination relied upon in the rejection.[3]

Claim 1 recites a method for fabricating an electronic component with a self-aligned source, drain and gate, comprising the steps of, *inter alia*, forming a metal layer on a source, a drain and a dummy gate; superficial, self-aligned siliciding of the source and drain by selectively siliciding the metal layer on the source and drain; and depositing at least one contact metal layer having a total thickness greater than a height of the dummy gate, polishing the at least one contact metal layer stopping at the dummy gate, and imparting an insulation characteristic to a surface region of the at least one contact metal layer and the metal layer on sides of a gate electrode.

The outstanding Office Action states that Boyd does not teach or suggest at least the steps of "forming a metal layer on the source, drain and dummy gate, selectively siliciding the metal layer on the source and drain; and depositing at least one layer of contact metal having a total thickness greater than the height of the dummy gate, and imparting an insulation characteristic to a surface region of the at least one contact metal layer and the metal layer on sides of the gate electrode."[4] The outstanding Office Action asserts that Ismail discloses the step of "imparting an insulation characteristic to a surface region 17 of the at least one contact metal layer and the metal layer on sides of the gate electrode as taught in col. 5, lines 12-48."[5] Applicant respectfully disagrees.

Ismail is directed to semiconductor and more particularly to self-aligned metal oxide semiconductor (MOS) field effect transistors (FETs) having submicron gate lengths with

[2] See id.
[3] See id.
[4] Office Action, page 3.
[5] Office Action, page 4.

T-shaped gate.[6] Ismail describes that "source/drain metallurgy regions 6 of tungsten may be anodically or thermally oxidized to produce a surface layer of the dielectric WO_3."[7] However, Ismail does teach or suggest the step of imparting an insulation characteristic to a surface region of at least one contact metal layer and a metal layer on sides of the gate electrode, as recited in Claim 1. The Office Action appears to argue that "material 15 for source/drain contact metallurgy" of Ismail corresponds to "at least one contact metal layer" of Claim 1.[8] However, nowhere in Ismail teach or suggest the step of imparting an insulation characteristic to a surface region of "at least one contact metal layer" **and** "metal layer on sides of the gate electrode," as recited in Claim 1.

Furthermore, in Ismail, a gate is formed "without any silicidation needed"[9] thus, Ismail teaches away from the claimed method. "A reference may be said to teach away when a person of ordinary skill in the art, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant."[10] To this end, "disclosures in the references that diverge from and teach away from the invention cannot be disregarded".[11] Accordingly, Ismail clearly does not teach or suggest imparting an insulation characteristic to a surface region of a metal layer on sides of a gate electrode, wherein the metal layer is selectively silicided, as recited in Claim 1.

Misra does not cure the deficiencies of Boyd and Ismail in this regard. For example, even assuming Misra could properly be combinable with Boyd and Ismail, which Applicant disputes, Misra does not teach or suggest at least the step of imparting an insulation characteristic to a surface region of at least one contact metal layer and a metal layer on sides of

[6] Col. 1, lines 7-10 of Ismail.
[7] Col. 5, lines 45-48 of Ismail.
[8] Office Action, page 4.
[9] Col. 1, lines 66-col. 2, lines 2 of Ismail.
[10] In re Gurley, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994).
[11] Phillips Petroleum Company v. U.S. Steel Corp., 9 USPQ2d 1461 (Fed. Cir. 1989).

the gate electrode, as recited in Claim 1.

Both Boyd and Misra use silicidation.[12] Conversely, as discussed above, in Ismail, a gate is formed "without any silicidation needed."[13] Thus, the combination of Ismail and Boyd and Misra, as suggested by the outstanding Office Action, is improper as Ismail expressly teaches away from such a motivation to combine.

Accordingly, Applicant respectfully requests that the rejection of Claim 1 under 35 U.S.C. § 103(a) be withdrawn. Claims 2-9 and 11 depend from Claim 1 and are likewise allowable for at least the reasons discussed above. Accordingly, Applicant respectfully submits that the rejection of Claims 2-9 and 11 under 35 U.S.C. § 103(a) be withdrawn as well.

In regard to the rejection of Claim 10 under 35 U.S.C. § 103(a) as unpatentable over Boyd in view of Misra and Ismail, and further in view of Gardner, Applicant respectfully traverses the rejection for the following reasons.

Claim 10 depends from Claim 1. As discussed above with respect to Claims 1, Boyd in view of Misra and Ismail does not teach or suggest each and every element recited in Claim 1. Gardner does not cure the deficiencies of Boyd in view of Misra and Ismail in this regard. For example, even assuming Gardner could properly be combinable with Boyd, Misra, and Ismail, which Applicant disputes, Gardner does not teach or suggest at least the step of imparting an insulation characteristic to a surface region of at least one contact metal layer and a metal layer on sides of the gate electrode, as recited in Claim 1. Accordingly, Applicant respectfully submits that the rejection of Claim 10 under 35 U.S.C. § 103(a) be withdrawn.

As Applicants have not substantively amended the claims in response to any rejection of record, should a further rejection be applied in the next Action based upon newly cited prior art, Applicants submit that such an action **cannot properly be considered a Final Office Action.**

[12] Office Action, pages 2-3.